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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,141	02/26/2002	Satoru Inoue	NSUG: 853	5402

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PARKHURST & WENDEL, L.L.P.
1421 PRINCE STREET
SUITE 210
ALEXANDRIA, VA 22314-2805

EXAMINER

DEL SOLE, JOSEPH S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/082,141	Applicant(s) INOUE ET AL.	
	Examiner Joseph S. Del Sole	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
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DETAILED ACTION

Drawings

1. The drawings were received on 7/12/04. These drawings are accepted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission in view of Ziegler (4,770,624).

Applicant's admission (at page 1, lines 10-27) teaches a ceramic honeycomb extrusion apparatus having a biaxial screw portion, a flow regulation portion, a foreign substance removal portion, and an extrusion portion having upstream and downstream ends, and inherently teaches extruding a ceramic honeycomb utilizing the taught ceramic honeycomb extrusion apparatus.

Applicant's admission fails to teach a flow regulation portion including a diameter reducing portion, a cylinder portion and a diameter expanding portion located at the downstream end of the extrusion portion wherein 1) an inlet shape of the diameter reducing portion adjacent the biaxial screw portion, which is congruent to an outlet shape of the biaxial screw portion; 2) an outlet shape of the diameter reducing portion adjacent the cylinder portion, which is congruent to an inlet shape of the cylinder portion; 3) an inlet shape of the diameter expanding portion adjacent the cylinder portion, which is congruent to an outlet shape of the cylinder portion; and 4) an outlet shape of the diameter expanding portion adjacent the foreign substance removal portion, which is congruent to an inlet shape of the foreign substance removal portion, wherein the flow regulation portion has a cassette mechanism having a detachable inner portion.

Ziegler teaches an extrusion apparatus (Fig 4) with a screw portion and a flow regulation portion (Fig 4, #70 and #74), the flow regulation portion includes a diameter reducing portion (Fig 4, in the vicinity of #68), a cylinder portion (Fig 4, in the vicinity of

#66') and a diameter expanding portion located at the downstream end of the extrusion portion (Fig 4, in the vicinity of #66'') wherein 1) an inlet shape of the diameter reducing portion adjacent the inlet to the flow regulation portion, which is congruent to an outlet shape of the inlet to the flow regulation portion; 2) an outlet shape of the diameter reducing portion adjacent the cylinder portion, which is congruent to an inlet shape of the cylinder portion; 3) an inlet shape of the diameter expanding portion adjacent the cylinder portion, which is congruent to an outlet shape of the cylinder portion; and 4) an outlet shape of the diameter expanding portion adjacent the outlet from the flow regulation portion, which is congruent to an inlet shape of the outlet from the flow regulation portion (Fig 4); the flow regulation portion has a cassette mechanism (Fig 4, #70 and #74) having a detachable inner portion (Fig 4, #70 or #74) for the purpose of controlling the frictional resistance on the viscous plastic material (col 2, lines 10-13).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Applicant's admitted prior art with a flow regulation portion having a diameter reducing portion, a cylinder portion and a diameter expanding portion as further taught above by Ziegler because it regulates the flow of an extrudate, decreasing the frictional resistance on the extrudate and minimizing (or eliminating) a potentially damaging temperature increase of the extrudate.

Response to Arguments

6. Applicant's arguments filed 7/12/04 have been fully considered but they are not persuasive.

The rejection of claims 1 and 4 over Applicant's admission in view of Heilmayr have been overcome by the amendment incorporating subject matter from claim 2 into claims 1 and 4.

The Applicant's amendment to the specification has overcome the previous objection.

The Applicant argues that Ziegler does not disclose collar 74 as being detachable from extension 76 or any other portion and that sleeve 70 is not disclosed to be removable from extension 76. Furthermore, the Applicant argues that sleeve and rotatable collar are not detachable inner portions of a cassette mechanism as recited in Applicants' claims 1 and 4.

The Examiner disagrees. As currently claimed, the cassette mechanism has a "detachable inner portion". Therefore, as claimed there need only be one detachable inner portion, and the detachable portion can be detachable from any structure, not necessarily the extension of Ziegler. Ziegler teaches two portions (70 and 74) of a cassette mechanism, and as claimed either portion fulfills the requirement of being an inner portion. As shown in the drawings and discussed in the specification the elements 70, 74 and 76 are distinct elements. Being distinct elements, they must be detachable from one another, regardless of the step necessary to detach the elements from one another. The threading 72 and the seals (shown in Figure 4 between 70 and 76, but not discussed) further demonstrate the separateness and detachability of the inner portion (either 70 or 74).

The Applicant argues that Ziegler does not show structure corresponding to foreign substance removal portion and that the Office action does not mention the foreign substance removal element.

The Examiner disagrees. The Office action does mention the foreign substance removal element at lines 4-5 of paragraph 6. The foreign substance removal element is taught by the Applicant's admission. Ziegler teaches a flow regulation portion (the cassette 70 and 74) having a diameter expanding portion with an outlet shape equal to the inlet shape of the outlet of the apparatus of Ziegler (shown by #78 of Figure 4). While Ziegler does not teach a foreign substance removal portion, the Office action demonstrates that it would be obvious to use Ziegler's flow regulation portion in the apparatus of the Applicant's admission and it is the combination of Ziegler and Applicant's admission that teaches the foreign substance removal element.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the rejection of claims 1 and 4 reiterated above shows the motivation for combination: namely, for the purpose of controlling frictional resistance of a viscous plastic material.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph S Del Sole
J.S.D.

August 12, 2004